Artistry in Sound

ONKYO

TX-906/904

Quartz Synthesized Tuner Amplifier

Instruction Manual

• *Congratulations on your purchase of the ONKYO TX-906, TX-904 Tuner-Amplifier.*
• *Please read this manual thoroughly before making connections and turning power on.*
• *Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new TX-906, TX-904.* • *Please retain this manual for future reference.*

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CAUTION

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

- The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

- For models having power cords with a polarized plug.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- Sur les modèles dont la fiche est polarisée.

ATTENTION: POUR PRÉVENIR LES CHOCS ÉLECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉES À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

Important safeguards

1. **Read Instructions** – All the safety and operating instructions should be read before the appliance is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the appliance and in the operating instructions should be adhered to.
4. **Follow Instructions** – All operating and use instructions should be followed.
5. **Water and Moisture** – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. **Carts and Stands** – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

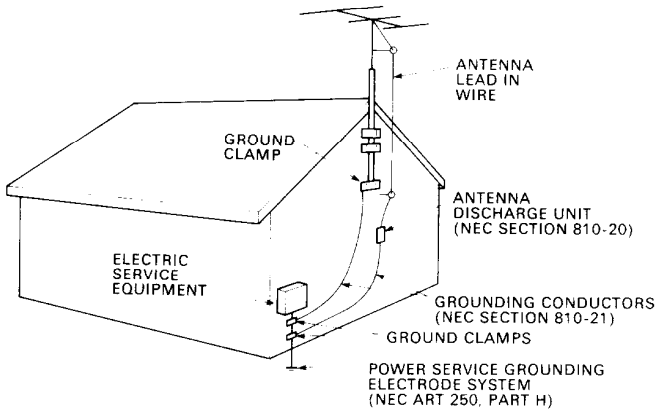
PORTABLE CART WARNING

S3125A

7. **Wall or Ceiling Mounting** – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. **Ventilation** – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. **Power Sources** – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. **Polarization** – If the appliance is provided a polarized plug having on blade wider than the other, please read the following information: The polarization of the plug is a safety feature. The polarized plug will only fit the outlet one way. If the plug does not fit fully into the outlet, try reversing it. If there is still trouble, the user should seek the services of a qualified electrician. Under no circumstances should the user attempt to defeat the polarization of the plug.
12. **Power-Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **Cleaning** – The appliance should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdooor antenna should be located away from power lines.
15. **Nonuse Periods** – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

16. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
17. **Damage Requiring Service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped or the enclosure damaged.
18. **Servicing** – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
19. **Outdoor Antenna Grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of the antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 73.1.

FIGURE 73.1:
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC – NATIONAL ELECTRICAL CODE

S2898A

Precautions

1. **Warranty Card**
   The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.
2. **Recording Copyright**
   Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.
3. **AC Fuse**
   The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your ONKYO service center.
4. **Care**
   From time to time you should wipe off the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water or a mild ammonia cleaner, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

Features

- **Plenty of Clean Power**
  TX-906: 80 watts of continuous power per channel into 8 ohms with no more than 0.08% total harmonic distortion. (2 × 145 watts dynamic power at 4 ohms)
  TX-904: 60 watts of continuous power per channel into 8 ohms with no more than 0.08% total harmonic distortion. (2 × 120 watts dynamic power at 4 ohms)
- **Built-In Simul Source Selector**
  To fully enjoy the benefits of the Multiple Room Remote System, the user can listen to a different source from that simultaneously playing in the main room, from a set of speakers installed in another room. For instance, in the main room an FM broadcast can be playing, while in another room the user listens to a CD player.
- **Video Capability**
  Both the TX-906 and TX-904 have input and output facilities for two VCRs (or one VCR and one videodisc player). So editing videotapes or copying from videodisc to tape is a snap. The user can even dub a new soundtrack onto an already recorded videotape from CD or another audio source. Gone forever is the bother of disconnecting one VCR and then reconnecting to a second unit just to copy a videotape.
- **Dolby Pro-Logic Surround Sound System (TX-906)**
- **Adjustable Digital Time Delay of 15, 20, 25 or 30 Milliseconds (TX-906)**
- **Multiple Room Remote System**
- **Discrete Output Stage**
- **40-Station Random Preset Tuning**
- **Six-Class Classified Memory**
- **APR (Automatic Precision Reception) System**
- **Direct Access Tuning**
- **Selective Tone Control**
- **Recording Selector**
- **Source Direct Switch**
- **RI Compatible Remote Control Included**

Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Explanation

Surround System (TX-906 only)

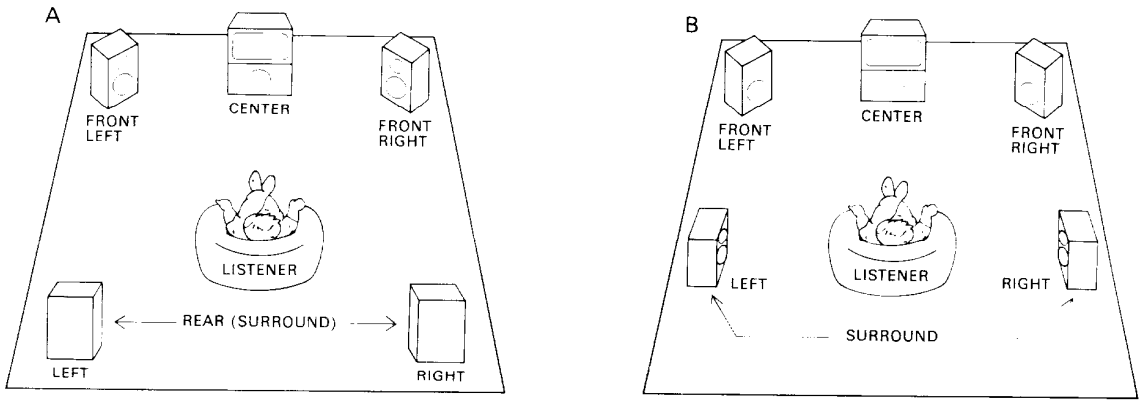
Many motion pictures produced in the last decade have been released in "Dolby Stereo" sound, with music, dialogue, and panned effects coming from the 3-channel front soundstage, and surround effects and ambience emmanating from the sides and rear of the theater. These four channels are encoded, or matrixed, into a two-channel DOLBY STEREO release, and decoded in the theater by a professional DOLBY STEREO MP (Motion Picture) decoder. These surround sound effects are 'hidden' in the two-channel stereo movie release, and decoded in the theater by special Dolby equipment.

These same two-channel motion picture masters are used for production of stereo VHS, VHS-Hi-Fi, Beta Hi-Fi, and stereo Laser Vision discs that you can buy or rent at your video store. The TX-906 incorporates the Dolby Pro Logic Surround Circuit, which is designed to emulate the audience experience found in DOLBY STEREO theaters. Like DOLBY SURROUND, DOLBY PRO LOGIC SURROUND is capable of creating a multi-dimensional soundstage, but with the increased channel separation it gives a far greater sense of "movement" and sound localization. Just like in the theater, the addition of the active center channel ensures that all audience members hear dialogue coming from its on-screen sources regardless of seating position.

Since the TX-906 is equipped with a front amplifier and a rear (surround) power amplifier, Dolby Pro Logic Surround and Hall, effects can all be produced. You can enjoy the feeling of a movie theater or concert hall in your own room. To reproduce these effects, rear (surround) speakers and center speakers are necessary. The placement of these speakers is important. You can experiment with various positions and locations to find the best placement for optimum sound quality in your room.

* The TX-906 comes without a center power amplifier. Use a power amplifier with a power rating equal to or better than the front amplifier of the TX-906. Without a center power amplifier, you can add the Dolby Pro Logic Surround Sound effect to the playback, by setting the center mode to PHANTOM.

Examples of Speaker Placement



With the rear (surround) speakers facing the wall, the reverberation effect amplifies the "surround" effect for a more "live" sound. Try it and see!

- **Dolby Pro Logic Surround (TX-906 only)**

  When using video cassette tapes or video discs that have the DOLBY STEREO or DOLBY SURROUND trade mark, you can achieve the same kind of sound in your room that you experience in a movie theater.

  The main Dolby Pro Logic Surround functions are sent through the center channel. Because of this, three modes must be available from the speaker and the center amplifier used by the center channel.

  1. Normal: When a small speaker is used on the center channel, signals of 100 Hz or more are output from the center speaker, and signals of 100 Hz or less are split between the front L and R channels.
  2. Wide band: When the front L and R channels are using similar speakers on the center channel, it operates throughout the full frequency range.
  3. Phantom: When no center speaker is used, the center channel signal is split between the front L and R speakers, producing the same results as found with a center speaker.

- **Hall**

  In most cases, the same kind of sound that you experience in a theater or concert hall, and the natural expansion of sound, can be achieved with a music source.

  Hall mode would be best suited to jazz and classical.

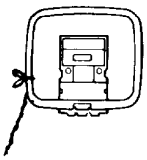
Multiple Room Remote System (RI)

The ONKYO HR-10(W) Remote Sensor (sold separately) greatly increases system flexibility. Used with your TX-906/904, the HR-10(W) allows you to control speakers even when you are not in the same room as the TX-906/904. In addition to basic functions like speaker on-off and volume and so on, you can also control most ONKYO CD Players, Cassette Decks and Digital Audio Tape Decks that use the RI (Remote Interactive) system. Adding an HE-50(AC) Remote Emitter (also available as an option) allows you to control even the non-ONKYO components in your home entertainment system from a separate room.

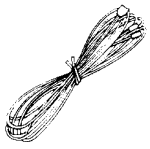
When the HE-50(AC) is being used to control more than one device from a distance but the infrared beams from the HE-50(AC) remote control transmitter alone will not reach these devices, connect an HE-10 (remote emitter head) to the HE-50(AC), and set it up to be aimed at the devices to be controlled. The HW-2 cable 6½' (2m) is attached with the HE-10. Up to three HE-10 units can be used with this equipment.

Before using this unit

1. Supplied Accessories

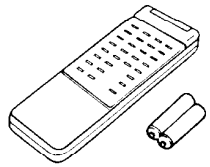


AM loop antenna x 1



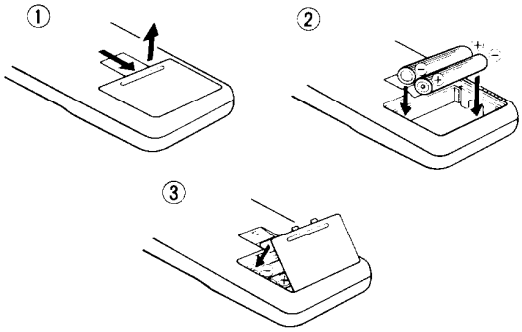
T-shaped FM antenna X 1

RI remote control cable x 1



Remote control transmitter x 1
Batteries x 2

2. Transmitter Battery Insertion



Precautions when using batteries

- The remote control transmitter is powered by two batteries. Before using this unit for the first time, insert the two batteries (included) as shown in the diagram.
- Average battery life is about one year. This period may be shorter depending on the frequency of use and environment (temperature and humidity) in which the remote control transmitter is used.
- If the remote control transmitter does not operate even though front panel controls function normally, the batteries should be replaced. Use only batteries listed in the following chart.

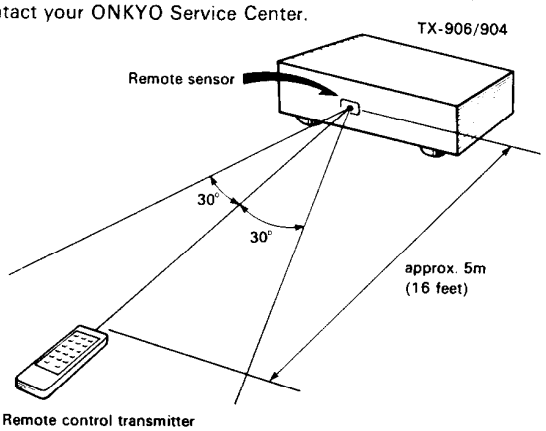
Type	Voltage	Size
Manganese	1.5V	AA R6 UM-3

NOTES:

1. Do not leave an expired battery in the case as it may leak or damage the battery case.
2. When inserting the batteries, be sure the (+) and (−) ends are properly aligned.
3. Do not use nickel-cadmium (rechargeable) batteries.
4. Do not use one specified (manganese) battery and one alkaline Battery at the same time.
5. Replace both batteries at once; do not use one old and one new battery together.

Using the remote control transmitter

1. The batteries of the remote control transmitter must be replaced periodically.
2. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of this unit is exposed to bright light. To prevent this from occurring, place this unit so that it is not directly exposed to bright light.
3. If this unit is placed inside an audio rack behind a glass door, the door should not have colored glass or have any decorations on it, since this could shorten the range or prevent commands from being received.
4. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must always be pointed at the reception window when a command is sent to the TX-906/904.
5. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your ONKYO Service Center.



Memory Preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in in order to charge the back-up system.
The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

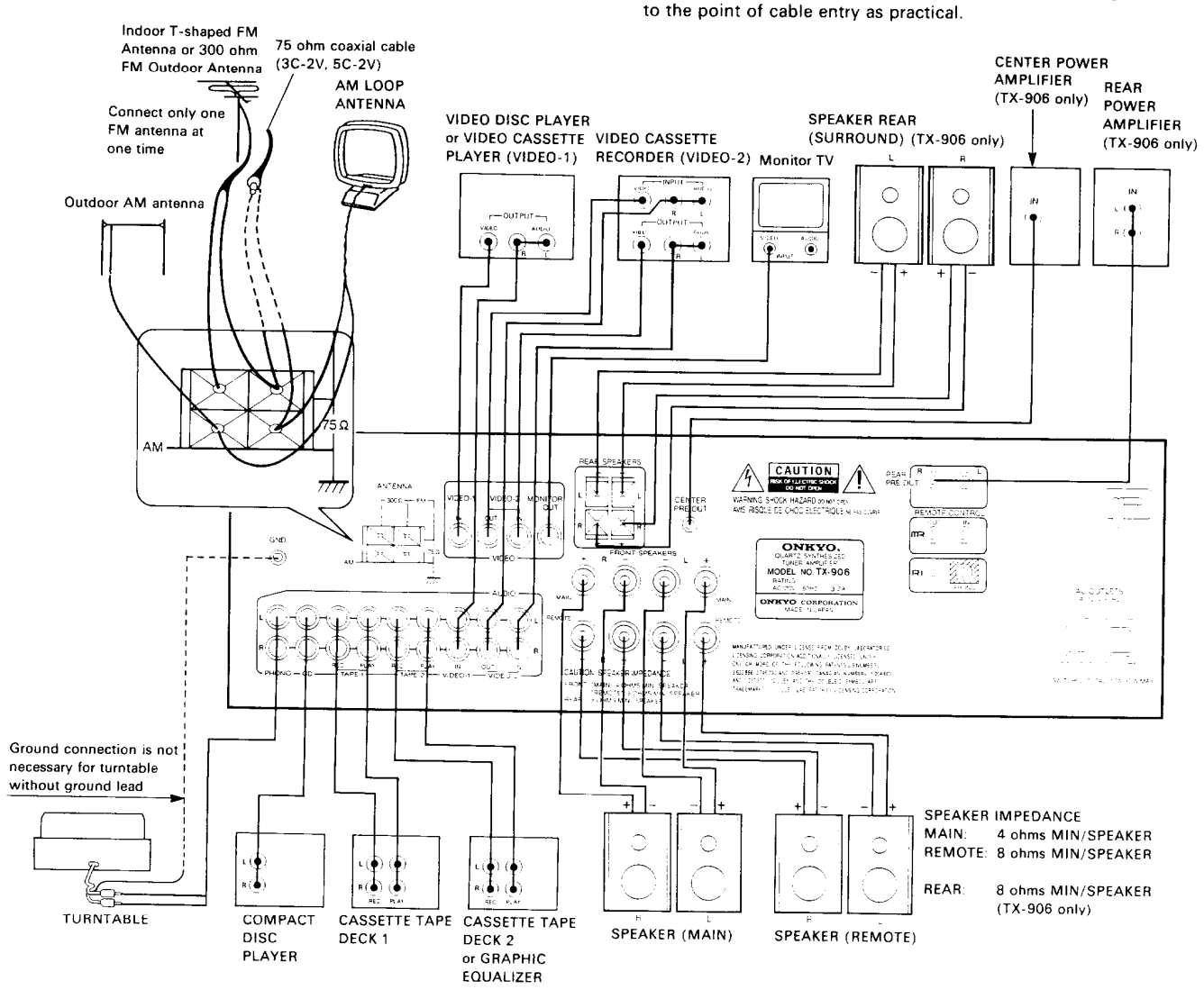
System connections

General

Switch the main power switch off before performing connections. Also be sure to perform left and right channel connections properly.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

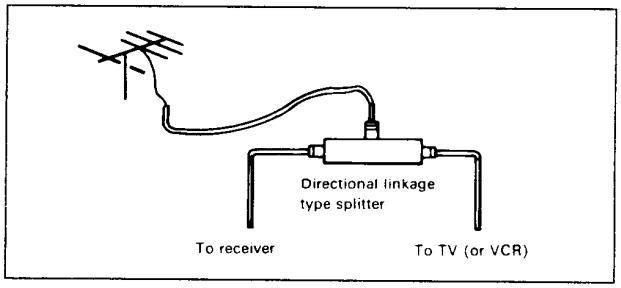

Indoor T-shaped FM Antenna or 300 ohm FM Outdoor Antenna
75 ohm coaxial cable (3C-2V, 5C-2V)
AM LOOP ANTENNA
Connect only one FM antenna at one time
Outdoor AM antenna
AM
75Ω
VIDEO DISC PLAYER or VIDEO CASSETTE PLAYER (VIDEO-1)
VIDEO CASSETTE RECORDER (VIDEO-2)
Monitor TV
SPEAKER REAR (SURROUND) (TX-906 only)
CENTER POWER AMPLIFIER (TX-906 only)
REAR POWER AMPLIFIER (TX-906 only)
CAUTION
ONKYO
MODEL NO. TX-906
Ground connection is not necessary for turntable without ground lead
TURNTABLE
COMPACT DISC PLAYER
CASSETTE TAPE DECK 1
CASSETTE TAPE DECK 2 or GRAPHIC EQUALIZER
SPEAKER (MAIN)
SPEAKER (REMOTE)
SPEAKER IMPEDANCE
MAIN: 4 ohms MIN/SPEAKER
REMOTE: 8 ohms MIN/SPEAKER
REAR: 8 ohms MIN/SPEAKER (TX-906 only)

FM Antenna Connections

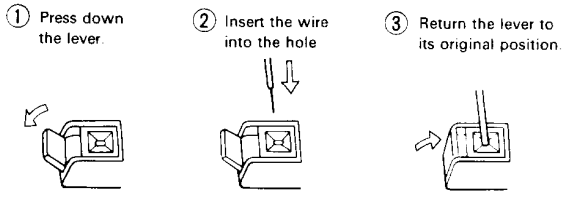
Use the T-shaped antenna if you live in an area where signal strength of FM broadcasts is high. Connect the antenna to the FM 300 ohms terminals and place the antenna on a wall or other surface in the position in which reception is best. If signal strength is low in your area, use a multi-element FM outdoor antenna and connect to this unit using a 75 ohm coaxial cable because this type of cable is more resistant to interference than 300 ohm cable. Consult your ONKYO authorized service center about the right type of antenna for your area.

NOTE:

Do not use the same antenna for both FM and TV (or VCR) reception since the FM and TV (or VCR) signals can interfere with each other. If you must use a common FM/TV (or VCR) antenna, use a directional linkage type splitter.

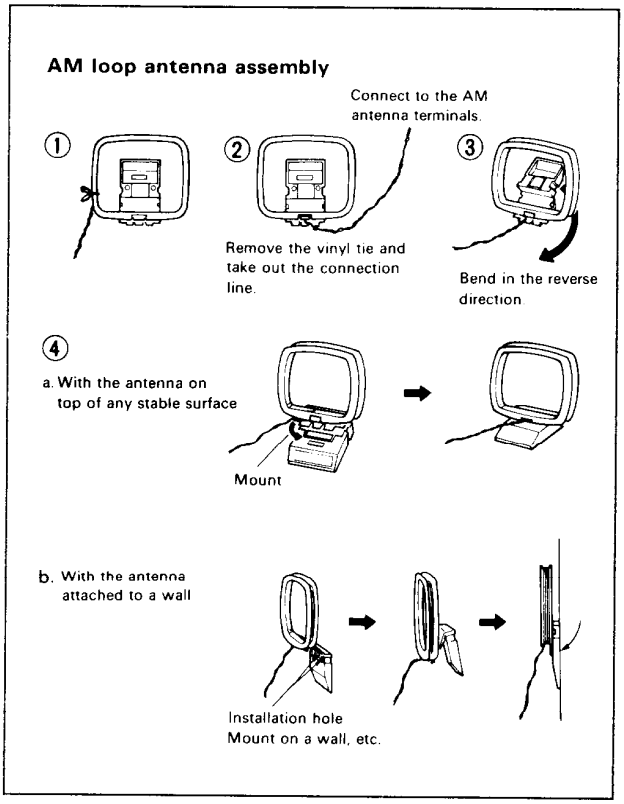


Antenna and Speaker (REAR) Connections



AM Antenna Connections

An AM loop antenna is included in the installation instructions bag. Take out the connection line and connect it to the AM antenna terminals. This loop antenna can be placed on top of any stable surface or attached to a wall. Try several positions to determine which gives the best reception. Be sure the antenna is not near a speaker, power cord, television set, VCR, or motorized appliances. When using an external AM antenna, do not remove the loop antenna; connect both antennas to the AM antenna terminals.


AM loop antenna assembly
Connect to the AM antenna terminals.
①
②
③
Remove the vinyl tie and take out the connection line.
Bend in the reverse direction
④
a. With the antenna on top of any stable surface
Mount
b. With the antenna attached to a wall
Installation hole
Mount on a wall, etc.

NOTE:

AM reception is easily affected by television sets and VCRs. Therefore, AM reception may be poor if this unit is placed too close to a TV or a VCR.

Speaker Connections (SPEAKERS)

1. Connect the speakers to "MAIN" and/or "REMOTE" terminals. The rear (surround) speakers should be connected to REAR terminals. (TX-906 only)
   When using an ONKYO ⟨TR⟩ system, connect the speakers in another room to the "REMOTE" terminals.
2. When connecting speakers, proper polarity is important. Always connect the (+) terminal (red) on this equipment to the (+) terminal on the speaker and the (−) terminal (black) on this equipment to the (−) terminal on the speaker.
3. Do not connect a single speaker in parallel to the right and left channel outputs.
4. Use speaker cables that have a low impedance and that are as short as possible.

- Attach speaker cables to the rear panel speaker terminals with care, being sure that connections are made firmly and that there is no possibility of a short circuit occurring.

Compact Disc Player or Other Component Connections (CD)

Connect the output leads of the CD player or an additional audio component to the CD jacks. An ONKYO CD player with remote control that has the ⟨RI⟩ mark can be operated by the TX-906/904. (Please refer to "Connections for Remote Control".) For more details, refer to your CD player instruction manual.

Turntable Connections (PHONO)

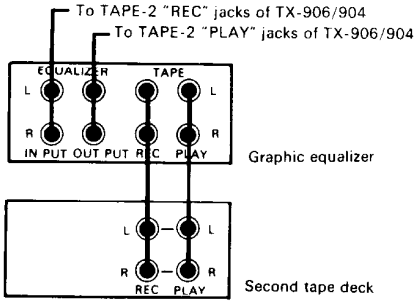
Connect the output leads of the turntable to the PHONO jacks. Be sure to connect the ground (earth) lead wire from the turntable to the ground terminal (GND). Lack of proper ground connection will cause hum. Turntables not provided with GND wires do not need to be connected.

1. Place the turntable on a firm shelf or deck free from vibrations (especially those generated by the speaker system). If the turntable is permitted to pick up such unwanted vibrations, not only with the performance of the unit drop, but distortion in the bass frequencies and howling in the speakers may also occur.
2. Check the turntable instruction manual for any other precautions.
3. The loud noises that occur when connecting and disconnecting the turntable leads, replacing the cartridge or lowering the tonearm could damage the speakers. Always turn the power switch off before making connections.
4. If an ONKYO turntable with remote control jack is used with this unit, the remote control transmitter can also be used to start and stop turntable operation. In this case, the turntable and TX-906/904 must be connected with a remote control cable. Insert the plug into the PHONO jack of the REMOTE CONTROL on the rear panel of the TX-906/904. (Please refer to "Connections for Remote Control".)

Tape Deck and Graphic Equalizer Connections (TAPE-1, TAPE-2)

1. This unit has facilities for two tape decks. If you are using only one tape deck, connect it to the TAPE-1 jacks. If you have two tape decks, connect one to the TAPE-1 jacks and the other to the TAPE-2 jacks.
2. Connect the output leads of the tape decks to the TAPE-1 and TAPE-2 "PLAY" jacks. Connect the input leads of the tape decks to the TAPE-1 and TAPE-2 "REC" jacks of the unit. For more details, refer to your tape deck instruction manual.
3. To connect a graphic equalizer, too, use the TAPE-2 jacks and connect the second tape deck to the tape jacks of the equalizer. (See the figure)

To connect a graphic equalizer and second tape deck to the TAPE-2 jacks.



4. If you have an ONKYO tape deck with the ⟨RI⟩ remote control jack, connect it to the TAPE-1 jacks. Please refer to the section "Connections for Remote Control" regarding connection of the remote control cable.

Video Disc Player (or Video Cassette Player) Connections (VIDEO-1)

Connect the VIDEO output of the video disc player to the TX-906/904 (VIDEO) VIDEO-1 "IN" jack and the AUDIO output to the (AUDIO) VIDEO-1 "IN" jack. The VIDEO-1 jack is only for playback, there is no OUT jack. For more details, refer to the video disc player instruction manual.

Video Cassette Recorder Connections (VIDEO-2)

1. Connect the VIDEO output of the VCR to the rear panel (VIDEO) VIDEO-2 "IN" jack and the VIDEO input of the VCR to the rear panel (VIDEO) VIDEO-2 "OUT" jack. Then connect the AUDIO output of the VCR to the (AUDIO) VIDEO-2 L and R "IN" jacks. Finally, connect the AUDIO input of the VCR to the (AUDIO) VIDEO-2 L and R "OUT" jacks.
2. When using a playback-only VCR, only the output connections need to be performed.
3. For more details, refer to the VCR instruction manual.

TV Connections (MONITOR)

1. Connect the TV VIDEO input to the TX-906/904 MONITOR "OUT" jack. There is no need to perform an audio connection since sound will be sent directly from the TX-906/904 to the speaker systems.
2. The TX-906/904 does not have an RF converter. Therefore, it can be used with only a monitor TV equipped with a video input jack.
3. Since the television set, tuner (FM/AM) section of this unit can cause interference that may disrupt sound and/or picture quality, the TV and TX-906/904 and their respective connection cables should be placed as far apart as possible. The use of a common TV/FM antenna is not recommended (see antenna section).

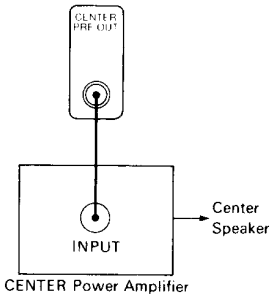
AC Outlets

- **SWITCHED:**
  These outlets are switched on and off by the Power button on the front panel and remote control transmitter. Capacity is total 80 watts.

Amplifier Connections

- **CENTER PRE OUT jack (TX-906 only)**

During surround operations, when a center power amplifier is used for the Center speaker, make the connections at the TX-906 CENTER PRE OUT jack, and the INPUT jack on the power amplifier.



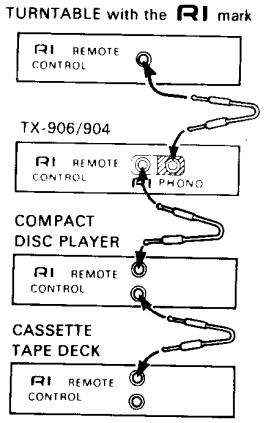
- **REAR PRE OUT jacks (TX-906 only)**
  During surround operations, when a separate amplifier is used for the Rear speakers, make the connections at the TX-906 REAR PRE OUT jacks, and INPUT jacks on the extra amplifier.

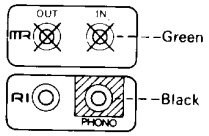
Connections for Remote Control (REMOTE CONTROL)

NOTE:

ONKYO turntables, cassette decks, CD players, etc. with the RI mark as well as ONKYO turntables without the RI mark can be operated by remote control.

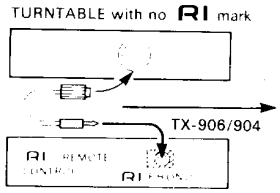
- A cassette tape deck, compact disc player, and turntable that have the ONKYO RI mark can be operated using the accessory remote control transmitter with the TX-906/904.





Connect a remote control cable to the black jack with the RI mark. Never connect it to the green jack with the MR mark.

An RI remote control cord equipped with a 0.136" (3.5mm) diameter miniature two-conductor phone plug is attached to the TX-906/904 and to any turntable or CD player, with the RI mark.



For this special cable
Contact an ONKYO Service Center.
For a turntable
(3.5mm pin to 7-pin plug cable)
part number; 2010140

Insert the accessory RI remote control cable plug attached to the ONKYO turntable with the RI mark into the PHONO of the TX-906/904 REMOTE CONTROL. To use an ONKYO compact disc player and cassette tape deck with the RI mark, insert the accessory remote control cable plug into the REMOTE CONTROL jack. As far as connecting sequence is concerned, it doesn't matter whether the cable is connected from the TX-906/904 to the cassette tape deck or to the compact disc player. The connecting sequence is fixed only for the turntable. The remote control transmitter is operated by facing it towards the remote control sensor of the TX-906/904.

- ONKYO turntables that can be remote controlled but do not have the RI mark. This equipment has a 7-pin DIN jack on the rear panel. Connect this jack and the jack on the rear of the TX-906/904 with the special cable for this purpose, which is sold separately.

NOTE:

Remote control operation is not possible when only the remote control cable is connected. Remote control cable and pin cord must be connected.

Connections for Multiple Room Remote Control

- When using only the HR-10 (option) to control TX-906/904 in the main room from another room, connect them as shown in Fig. 1. In this case, ONKYO CD player and cassette tape deck bearing the RI mark connected to the TX-906/904 can be controlled.

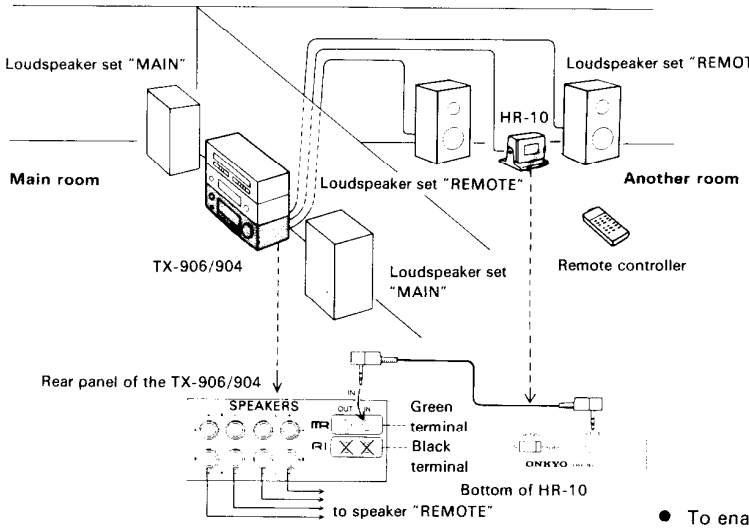


Fig. 1

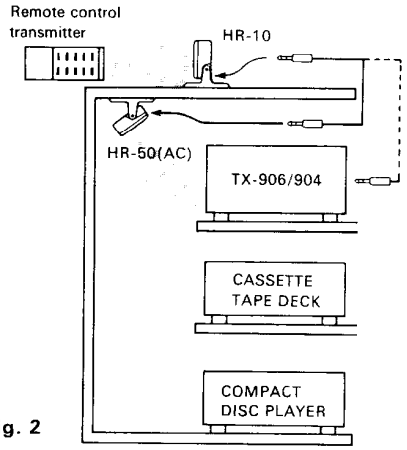


Fig. 2

- To enable remote control operation when the TX-906/904 is mounted in a rack which will not permit infra-red beams to pass, place the HR-10 somewhere outside the rack and set the HE-50(AC) in a position which will permit remote control operation of the TX-906/904. The HE-50(AC) is not necessary when utilizing the ONKYO set with the RI mark. Please connect the HR-10 and TX-906/904. (see Fig.2)

- A connection example using the HR-10 (option) and HE-50 (AC) (Option) to control components in the main room from another room is shown in Fig. 3.
  If all the components can not be controlled by the HE-50 (AC) alone because they are installed at various places in the main room, use the remote emitter head HE-10 (option). In this case, if components possess infrared remote control feature, they can be controlled even if they are not ONKYO products.

NOTE:

Make sure that the HE-50 faces TX-906/904 in the main room.

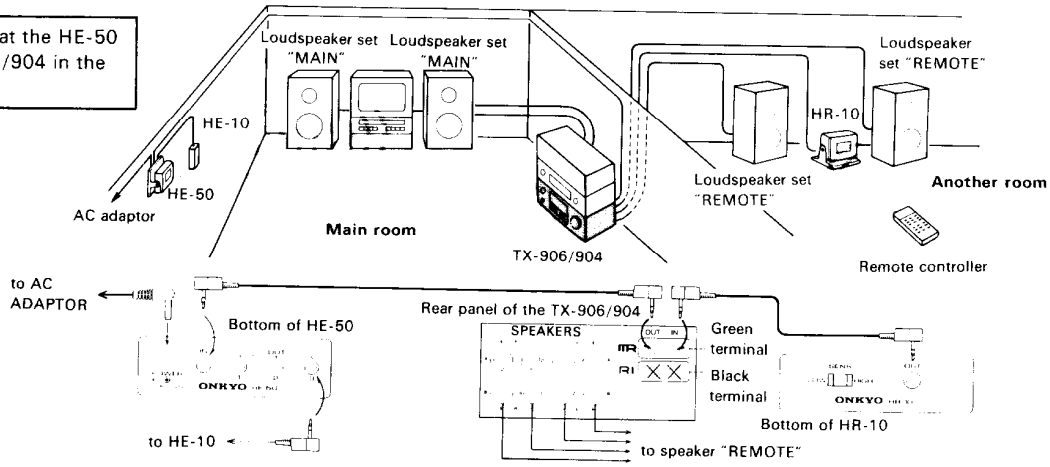


Fig. 3

Remote sensor and emitter (like the HR-10 and HE-50(AC)) should be connected with low capacitance shielded two coaxial cable with mini-plug 1/8" (3.5 mm diameter) connectors. Maximum cable length is determined by the characteristics of the particular cable used but approximately 164' (50 m) lengths are generally practical. Ready made cable complete with mini-plug connectors are available in the following lengths: 6 1/2' (2m) (HW-2), 98 7/16' (30m) (HW-30), and 164' (50m) (HW-50).
(ONKYO cables may not be sold in some regions.)
Refer to the instruction manual which comes with the HR-10 when making these connections.
Use low impedance cables to connect the TX-906/904 in the main room and a set of loudspeakers in another room.

NOTES:

- Always unplug the AC power cords for the TX-906/904 and HE-50(AC) when connecting the MR.
- Insert the MR mini-plug into the GREEN TERMINAL on the rear panel of the TX-906/904.
- Don't forget that you can always control your TX-906/904 with its supplied remote controller, even when you are also using the HE-10/HE-50(AC) multi-room remote system. Simply aim the standard remote controller at the receiver's front panel remote sensor.

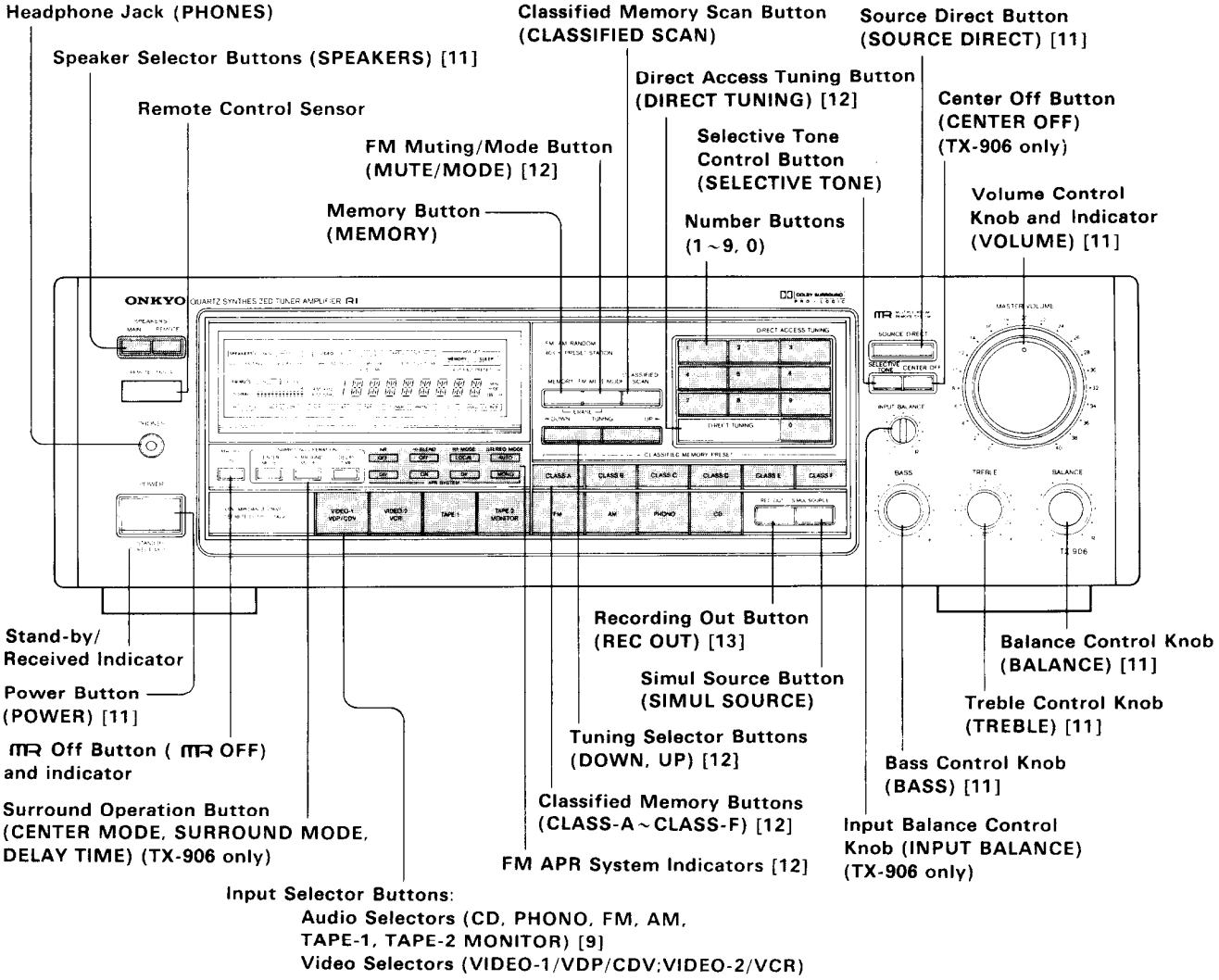
Control positions and names

NOTE:

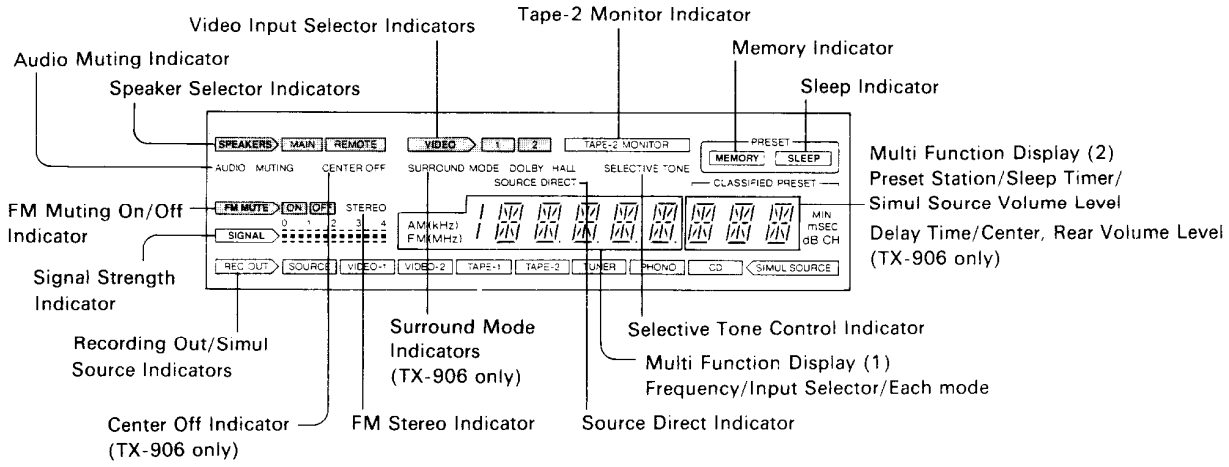
- The features, specifications, and display for the TX-906 and TX-904 are slightly different. Read this manual carefully to operate the model you have purchased correctly.

Front panel

For more information about buttons or controls, turn to the page number listed in the [ ].


Headphone Jack (PHONES)
Speaker Selector Buttons (SPEAKERS) [11]
Remote Control Sensor
FM Muting/Mode Button (MUTE/MODE) [12]
Memory Button (MEMORY)
Classified Memory Scan Button (CLASSIFIED SCAN)
Direct Access Tuning Button (DIRECT TUNING) [12]
Selective Tone Control Button (SELECTIVE TONE)
Number Buttons (1~9, 0)
Source Direct Button (SOURCE DIRECT) [11]
Center Off Button (CENTER OFF) (TX-906 only)
Volume Control Knob and Indicator (VOLUME) [11]
Stand-by/ Received Indicator
Power Button (POWER) [11]
MR Off Button (MR OFF) and indicator
Surround Operation Button (CENTER MODE, SURROUND MODE, DELAY TIME) (TX-906 only)
Input Selector Buttons:
Audio Selectors (CD, PHONO, FM, AM, TAPE-1, TAPE-2 MONITOR) [9]
Video Selectors (VIDEO-1/VDP/CDV;VIDEO-2/VCR)
Recording Out Button (REC OUT) [13]
Simul Source Button (SIMUL SOURCE)
Tuning Selector Buttons (DOWN, UP) [12]
Classified Memory Buttons (CLASS-A~CLASS-F) [12]
FM APR System Indicators [12]
Input Balance Control Knob (INPUT BALANCE) (TX-906 only)
Balance Control Knob (BALANCE) [11]
Treble Control Knob (TREBLE) [11]
Bass Control Knob (BASS) [11]

Display and indicators



Remote control transmitter
RC-208S (TX-906), RC-210S (TX-904)

Power Button (POWER)

Input Selector Buttons
(CD, PHONO, TUNER, VIDEO-1, VIDEO-2, TAPE-1, TAPE-2, SOURCE DIRECT)

* When the TUNER button is pressed, the station which was received previously is recalled. Selection of AM or FM should be done on the main unit.

Phono Operation Button (PLAY/REJECT)

This button is used to operate the turntable. The phono operation button can be used only when the PHONO input selector button has been pressed. Each time the phono operation button is pressed, the remote control transmitter alternately emits the play or reject command.

* Before starting record play using remote control, confirm that there is a record on the platter. If there is no record, the stylus will be lowered to the platter, resulting in serious damage to the stylus.

CD Operation Buttons (CD)

These buttons are used to operate an ONKYO CD player with the RI mark.

- ▶ : Press this button to play the CD player.
- ▮▮ : Press this button to pause the CD play back. To resume disc play, press the PLAY button.
- DISC : Press to use for sequential selection of discs in the order they were loaded on the CD changer.
- ■ : Press this button to stop the CD player.
- ⏮ : Press this button to go back to the beginning of the current track and again to skip back to the previous track.
- ⏭ : Press this button to skip to the next track.

Surround Mode Button
(SURROUND MODE) (RC-208S only)

Delay Time Button (DELAY TIME)
(RC-208S only)

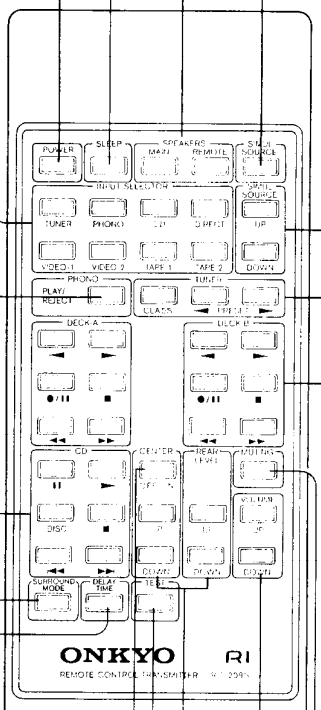
Center Off Button (CENTER OFF)
(RC-208S only)

Test Tone Button (TEST) (RC-208S only)

This operates when Dolby Surround mode has been selected as the SURROUND MODE. Pink noise is produced in order to match the volume levels used by the Front, Center, and Rear speakers. Please follow the procedure described above to do this matching. Press the TEST button again after finishing adjustment.

Center Level Up/Down Buttons (CENTER UP/DOWN) Rear Level Up/Down Buttons (REAR UP/DOWM)
(RC-208S only)

These buttons are used to adjust the volume in the Surround mode. Every time one of the buttons is pressed, the display shows the level for two seconds. For the Surround mode, the indication for the center or rear ranges from the minimum of (-∞ dB), −67, −66 ... 0, +1, ... to the maximum of (+12dB). Indications include CENT for center, REAR for rear. These level settings can be memorized.



Sleep button (SLEEP) (Remote control transmitter only)

Press to set the power off timer. The sleep timer is a function which button off the power to the system from the time it is set. When this button is pressed, "90 MIN" is displayed for 5 seconds, and the power goes off 90 minutes later. Each time the button is pressed during 5 seconds, the timer setting changes, by 10 minute intervals, such as 80, 70, 60 .... While the sleep timer is operating, the SLEEP indicator is lighted. If the sleep button is pressed during this time, the amount of time remaining on the sleep timer is displayed, and if the button is pressed during that display, 10 minutes will be subtracted from that time.
If the button is pressed when the panel display shows 10 minutes or less, the sleep timer is cancelled, and the power is not turned off.

Speaker Selector Buttons (SPEAKERS)

Simul Source Button (SIMUL SOURCE)

Simul Source Level Up/Down Buttons (UP/DOWN)

These buttons are used to adjust the volume in the Simul Source mode. Every time one of the buttons is pressed the display shows the level for two seconds, the indication for the Sub Room output level ranges from the minimum of (-∞ dB), −79, −78 ... −1. to the maximum of (0dB). Indications include SIMUL for simul source. This level settings can be memorized.

Tuner Operation Buttons (TUNER)

CLASS : Class selector button
◀ PRESET ▶ : Preset memory DOWN/UP buttons

Tape Operation Buttons (DECK-A, DECK-B)

These buttons control ONKYO double cassette tape decks that can be remote controlled. Use the DECK-B buttons to control single cassette tape decks with the RI mark.

- ●/▮▮ : When this is pressed, the recording stand-by mode is entered.
- ◀ : The tape plays, moving from right to left, or, in the recording stand-by mode, recording begins.
- ■ : Interrupts all operations.
- ▶ : The tape plays, moving from left to right, or, in the recording stand-by mode, recording begins.
- ◀◀ : Fast forward from right to left.
- ▶▶ : Fast forward from left to right.

Audio Muting Button (MUTING)

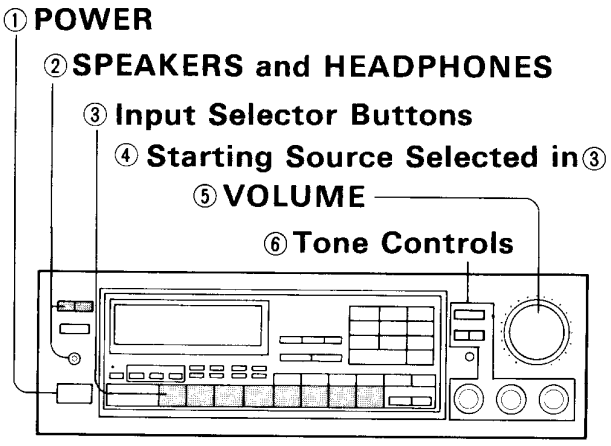
This button temporarily switches off the sound from the speaker or headphone. Pressing this button will operate the TX-906/904 audio muting circuit. The audio muting indicator "MUTING" will flash. Pressing the button again or using the POWER button on the remote control transmitter to turn the power on will turn off the audio muting.

* Pressing this button does not mute the sound of the simul source. Press the SPEAKERS REMOTE button to mute the sound of the simul source.

Volume Buttons (UP/DOWN)

Operations

To listen to your favorite Source



① Press the POWER button to turn on the power.
② Select the desired pair of speakers by depressing the corresponding speaker selector button. (SPEAKERS MAIN/REMOTE)
The REMOTE button can only be operated in the SIMUL SOURCE mode.

When using headphones, use the jack located under the speaker selector. Stereo headphones with a standard binaural plug can be connected here. (Sound from the front MAIN speakers is output.) The sound from the headphones in the Surround Mode may be different from that which is obtained from speakers. The sound in the headphones may seem relatively far-away. (TX-906 only)

③ Press one of the desired Input Selector Button (CD, PHONO, FM, AM, TAPE-1, TAPE-2 MONITOR, VIDEO-1, 2).
Make sure that the connections between the input sources are correct.
- The button pressed is shown in Display. For FM or AM, the band and the frequency are shown in Display.
- Confirm that the TAPE-2 MONITOR indicator is off when a source other than the TAPE-2 has been selected. Also check the audio muting is off.

④ Start play of the selected input source.
- Follow the operating instructions of that unit.
- If FM or AM is selected, please refer to the section "Tuner Reception".

⑤ Adjust the MASTER VOLUME Control knob to the appropriate level.

⑥ Adjust the Tone Controls to obtain the desired tone setting.

NOTE:

After selecting VIDEO-1 or VIDEO-2, you can display the images of the selected video source while listening to the sound of another source. (CD, TUNER, PHONO, TAPE-1 or 2) In such case, the setting of the video selector button is indicated by the lit video input selector indicator.

Explanation of the Buttons

■ **Power Button (POWER) and Stand-by/Received Indicator**
The Stand-by/Received Indicator comes on when the AC power cord for this unit has been inserted in an outlet. This indicates that the TX-906/904 is standing by for operation. Pressing the POWER button or remote control POWER button, the main unit will come on, and power will be supplied from the AC outlet to the rear panel. This indicator then goes off. The indicator also lights when a signal is received from the remote control unit.

■ **Speaker Selector buttons (SPEAKERS MAIN/REMOTE) and Indicators**
This unit can drive two pairs of front speakers in pairs (MAIN or REMOTE) or fours (MAIN and REMOTE). To listen to both speaker systems at once, depress both speaker selector buttons. When the REC MODE (Surround mode) is on, REMOTE SPEAKER is off. (TX-906 only)
MAIN and REMOTE selector can be operated through the MAIN and REMOTE button on the remote control transmitter.

■ **Master Volume Control Knob (MASTER VOLUME) (TX-906)**
Use the MASTER VOLUME control knob to adjust the volume of the front MAIN, REAR (surround) speakers, center pre out level and rear pre out level at the same time. Turn clockwise to increase the volume level. The volume can be adjusted manually and by the remote control transmitter's volume UP/DOWN buttons. When adjusted by remote control, the volume knob rotates along with the volume indicator on the knob. Volume for the center or rear speaker is controlled by using the CENTER UP/DOWN or REAR UP/DOWN buttons on the remote control transmitter.

■ **Volume Control Knob (VOLUME) (TX-904)**
Use the volume control knob to adjust the volume of the MAIN speakers. The volume can be adjusted manually and by the remote control transmitter's volume UP/DOWN button.

■ **Source Direct Button (SOURCE DIRECT) and Indicator**
When you select SOURCE DIRECT, you can obtain a "pure" sound reproduction, by passing the bass, treble, balance, selective tone and surround function, and using only the volume control. The "SOURCE DIRECT" on the display lights up. This button is also enabled by the button of the remote control transmitter.

Tone Controls

■ **Bass Control Knob (BASS)**
Adjust to strengthen or weaken bass response. (Not effective for the rear speakers, center pre out signal and simul source signal.)

■ **Treble Control Knob (TREBLE)**
Adjust to strengthen or weaken treble response. (Not effective for the rear speakers, center pre out signal and simul source signal.)
* TREBLE and BASS are effective for the L and R of the front speakers. The best effect from DOLBY PRO LOGIC SURROUND can be obtained when equal settings are used for the sound from the L/R front speakers and the sound from the center speaker for the middle and treble ranges. (TX-906)

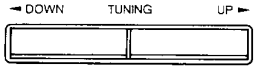
■ **Balance Control Knob (BALANCE)**
Use the Balance Control Knob (BALANCE) to adjust the relative volume levels of the left and right speaker systems. This adjusts the relative volume level of the front MAIN speaker systems.

■ **Selective Tone Control Button (SELECTIVE TONE) and Indicator**
Switching on this button lights up the indicator and creates a clear reproduction quality of the ultra low frequencies and high frequencies. (Affects the L/R speakers and center pre out.)

Tuner Reception

Press the FM or AM Input Selector button and make sure that the TAPE-2 MONITOR indicator is off and audio muting is off.

■ **Tuning with the TUNING buttons**

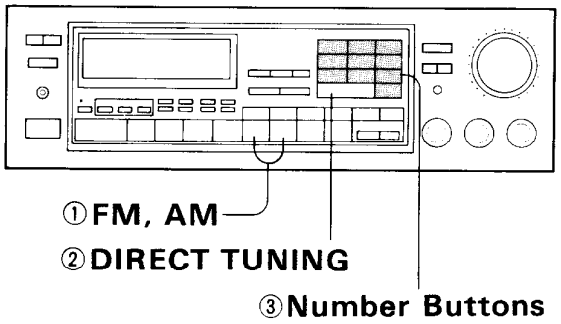


To tune in an FM or AM station not stored in the memory, press one of the Tuning selector buttons. If you press UP, the frequency is increased. Pressing DOWN decreases. Note that the frequency is changed in 100kHz steps in FM and 10kHz steps in AM when the Tuning selector button is pressed in single steps. If this button is pressed continuously for more than 0.5 seconds, the auto tuning mode is entered, and frequencies are scanned automatically. When a broadcast signal is received, scanning stops and that frequency is displayed. If a different frequency is desired, press the button once again.

- Scanning will not stop for broadcasts weak enough to be suppressed by the muting circuit. To receive a weak FM broadcast, set the MUTE/MODE button to the OFF position and select the frequency of the desired broadcast station.

■ **Receiving a station by inputting the frequency for the station directly (Direct Tuning)**

If the frequency for the desired station is known, input the frequency number directly.

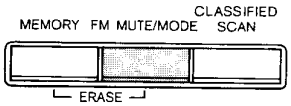


① Press the AM or FM button of the Input selector buttons.
② Press the DIRECT TUNING button.
- "–" will flash for 16 seconds in the Frequency Display.

③ Input the desired frequency number by using the Number Buttons while the cursors are flashing. For instance, if you wish to receive the station of 88.1MHz, press the Number Buttons, 8, 8 and 1.
- For AM reception, inputting a number to the 10kHz digit sets 0 to the 1kHz digit automatically.
- If the desired frequency set in this operation does not exist, the frequency which is the nearest and lower than the desired frequency will be received. If the frequency set is not in the receive frequency range, the frequency flashes for two seconds and then the previous frequency will be displayed.
- If a wrong frequency has been set, press the DIRECT TUNING button and start again.

■ **How to use the FM Muting/Mode Button (MUTE/MODE)**

In the Muting ON (STEREO) setting, FM stereo reception is possible and the muting circuit suppresses interstation noise and weak FM stations. In the OFF (MONO) setting, interstation noise will be heard and even weak FM stations can be received. (Muting/Mode operation is effective for only FM reception.)

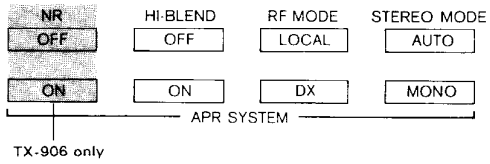


- The Stereo indicator will light up if the broadcast is being received in stereo. The Stereo indicator will not light up if the broadcast is monaural or too weak to be received in Stereo.

Automatic Precision Reception System (FM Mode)

APR system is ONKYO's unique computer-controlled system. APR system automatically sets the RF stage gain (Distance/Local), the NR function (OFF/ON) (TX-906 only) for reducing noise in weak signals, the HI-BLEND function (OFF/ON) for reducing noise in weak stereo signals, and the auto stereo/mono reception modes to the proper settings for the qualily of the broadcast currently being received. This indicator changes each time the APR circuit switches between the LOCAL/DX, NR OFF/ON, HI-BLEND OFF/ON or AUTO/MONO to show the current APR setting. (APR system is effective for only FM reception.)

APR System Indicators



NOTES:

- When MUTE/MODE button is OFF (MONO), the APR Mode selection function does not operate, and the STEREO MODE indicator is forced to "MONO".
- The RF MODE will indicate LOCAL when sufficient signal is received.

Classified Memory Function

The memory can be divided (classified) for different users or programs of stations.

NOTE:

There are times when frequencies are left in the machine's memory from the final testing done prior to shipment. If this is the case with your TX-906/904, cancel unnecessary preset stations according to "How to cancel memorized stations" and memorize desired frequencies.

■ **How to classify stations**

With this model, six classes (CLASS A to F) are available and stations can be memorized in any class. A total of 40 stations can be memorized in classes from A to F. Although the same station can be memorized in different classes, the memory number for the station will differ depending on the order in which the station is memorized in the classes.

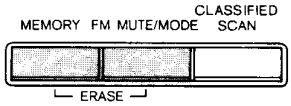
① Tune in the desired station (see section on "Tuner Reception").
② Press the MEMORY button.
- The MEMORY indicator will flash for 8 seconds.

③ Press the desired Classified Memory button (one of buttons A to F).
- The station is memorized in the selected class with the memory number which is the smallest of the unoccupied numbers in the class.

By repeating the operations above, up to 40 stations can be memorized. If an attempt is made to memorize 41 stations or more, "FULL" will be displayed indicating that no more stations can be memorized.

■ **How to cancel memorized stations**

Retrieve the class number you want to cancel (see "How to retrieve memorized stations") and then press the MUTE/MODE button while holding down the MEMORY button. Another station can be memorized with the memory number which has been cancelled.



■ **How to retrieve memorized stations**

① Press the Classified Memory button for the desired class. If remote control is used, the class next to the present one is retrieved when the CLASS button is pressed.
- The memory number (station) which was being received before the class is retrieved will be received.

② There are several methods to proceed after the above operations are carried out. Use any of the following methods.

a. Pressing the same Classified Memory button again permits the next preset memory number (station) to be received.

b. Input the memory number you wish to receive by using the Number buttons.
- If the memory number consists of 2 digits, input two numbers, immediately one after the other. For instance, when inputting "15", "15" will not be registered if you wait more than one second before inputting "5", resulting in only "1" being registered.
- If a number other than a number from 1 to 40, or a number which has not been memorized is input, the number flashes for 2 seconds and then the number which was displayed before will be displayed.
- If a number between 1 and 4 is pressed, the display and station are changed 1 second later.

c. Press the CLASSIFIED SCAN button
- Stations memorized in the present class will be scanned in a order and the corresponding memory number will flash in the Preset station display at each scan. After the last memory number of the class is reached, scanning starts again from the first memory number of the class. Pressing the CLASSIFIED SCAN button again stops scanning.

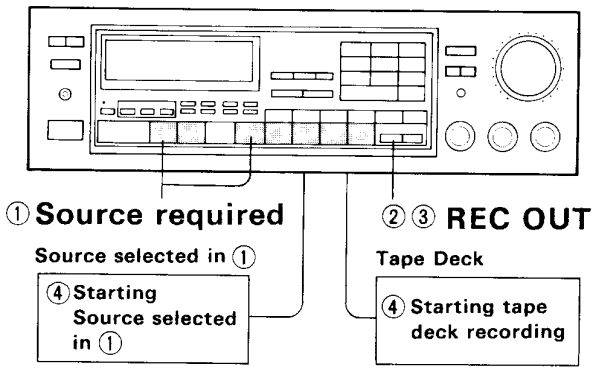
d. When the PRESET UP or DOWN button of the remote controller is pressed, the memory number of the class currently being received will be incremented or decremented. Keeping pressing the button increments or decrements continuously. After the maximum or minimum number is reached, the next class or one before the present class will be entered.

Tape Recording

With the TX-906/904 you can perform recording while listening to the sound of another source through speakers or headphones. Make all connections between the tape deck and the unit as shown in the System Connections diagram.

■ **Recording and dubbing to a tape deck connected to TAPE-1**

(When recording the source you are listening to)



① Press the input selector button to select the source to be recorded. (Other than TAPE-1)

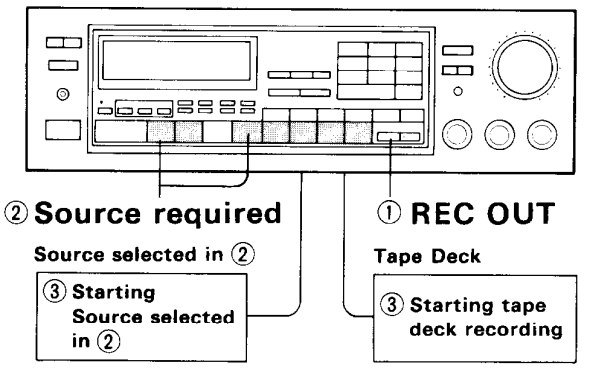
② Press the REC OUT button.
- [REC OUT] on the display flashes for 8 seconds.

③ Press the REC OUT button again while the [REC OUT] indicator is flashing.
- [REC OUT] and [SOURCE] will light, and the indication of the source selected by the input selector button will be marked with a red frame.

④ Start the device selected in step ①, while setting the tape deck connected to TAPE-1 to recording mode.
- Set the proper recording level using the controls on the tape deck used for recording. Also, during recording and dubbing operations, never change the positions of any controls (bass, treble, etc.) on this unit.

NOTES:
- Pressing the input selector button during recording will change the source being recorded.
- When the TAPE-2 MONITOR indicator is on, only TAPE-2 can be recorded and if the input selector is changed, the red frame of TAPE-2 will not change.

(When recording a source different from the one you are listening to)



① Press the REC OUT button.
- [REC OUT] on the display will flash for 8 seconds.

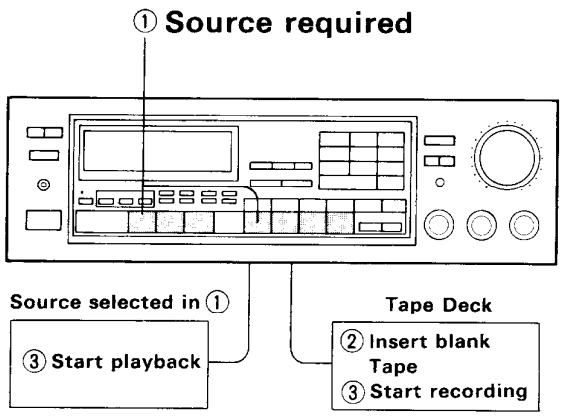
② Press the input selector button for the source to be recorded while the [REC OUT] indicator is flashing. (Other than TAPE-1)
- [REC OUT] will light and the indication of the source selected will be marked with a red frame. This source will be output from the REC OUT jacks of TAPE-1, VIDEO-2. The source you are listening to does not change.

③ Start the source device selected in step ②, and start recording on the tape deck connected to TAPE-1.

NOTES:

- The source selected with the input selector will be output at REC OUT of TAPE-1, 2, VIDEO-2 in the Simul Source mode.
- When FM or AM has been selected on the tuner as described in step ② with the input selector being other than TUNER, the display will show the tuner indication for five seconds, between the scanning of the CLASSIFIED SCAN programs and the preset station of the tuner can be selected during this period. When the input selecter is TUNER, the FM/AM bands are not switched, if the FM or AM band is selected on the TUNER, by the REC OUT button.

■ **Recording and dubbing to a tape deck connected to TAPE-2**



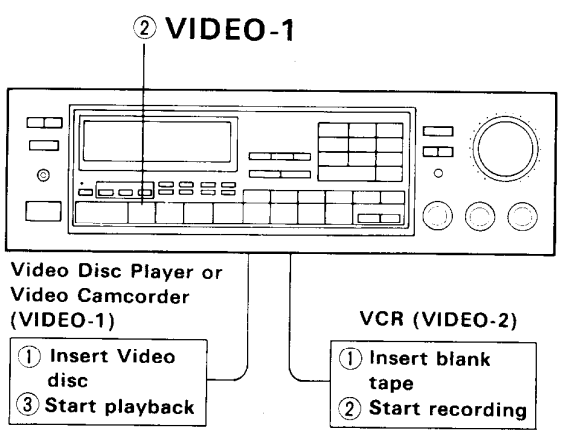
① Press the input selector button of the source to be recorded. (Other than TAPE-2)
② Put a blank tape in TAPE-2.
③ Start playing back the device selected in step ①, and start recording on TAPE-2.

- When the TAPE-2 MONITOR button is in the OFF position, the source signals can be monitored through the speakers or the headphones. If tape deck 2 has three heads, the just-recorded signals can be monitored (when the TAPE-2 MONITOR button is in the ON position). Refer to the tape deck instruction manuals for more details.
- Set the recording level using the controls on the tape deck used for recording. Also, during recording and dubbing operations. never change the positions of any controls (bass, treble, etc.) on this unit.

■ **Using the Graphic Equalizer**

① Connect the graphic equalizer to the TAPE-2 jacks on the rear panel.
② If a second tape deck is used, connect it to the tape jacks on the graphic equalizer.
③ Press the TAPE-2 MONITOR button.
④ Follow the graphic equalizer operating instructions.
⑤ To record an equalized signal, use tape deck 2 (connected to the equalizer) for recording.

■ **Video Disc Player (or Video Camcorder) to VCR recording**



Video disc programs can be recorded onto a VCR (VIDEO-2)

① Load a disc in the video disc player, and a blank tape in the VCR (VIDEO-2)
② Press the VIDEO-1 input selector button.
③ Begin playback of the video disc player and recording of the VCR.

- Refer to the video disc player, video camcorder or VCR instruction manuals for additional information.

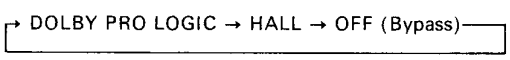
NOTES:

- When REC OUT is set to VIDEO-2, you can not record the sound and video of the VCR (VIDEO-2). Change REC OUT to [SOURCE] ([VIDEO-1]).
- If you want to mix an other sound SOURCE onto the video signal from VIDEO-1, choose the SOURCE using the REC OUT button.
- The source selected with the input selector will be output at REC OUT of VIDEO-2 in the simul source mode.

Use of Surround Mode (TX-906 only)

■ **Surround Mode Button (SURROUND MODE) and Indicator**

Use this button in conjunction with the sound source being reproduced. This will rotate one step at a time through the following pattern each time this button is pressed:



DOLBY PRO LOGIC : When the sound source features the DOLBY SURROUND trademark.

HALL : Create a concert-hall effect.

OFF (Bypass) : When you are not using surround sound. When this is pressed, no sound is produced from the center and rear pre out and rear (surround) speakers.

These modes can be changed with the remote control transmitter by using the surround mode button.

■ **Delay Time Button (DELAY TIME) and Indicator**

You can change the delay time for the sound from the rear (surround) speakers. Pressing this button changes the delay time every 5 msec during a period of 15 ~ 30 msec in Dolby Pro Logic, and every 5 msec during 5 ~ 40 msec in Hall. This condition is shown in numeric values on the display. Dolby Surround delay time is specified at 20msec. It is recommended that initial Dolby Surround delay be set at 20msec, and adjustment to either 15 or 30 is possible via the control. By adjusting the delay time, and carefully adjusting Master Volume Level, Center Volume Level and Rear Volume Level, the apparent acoustic size of your listening room can be enlarged or reduced. Adjustable delay time allows you to tailor the acoustic size of your listening environment to match the sonic characteristics of the audio program. Use a longer delay for larger acoustic spaces, such as concert halls, cathedrals, etc. Use a shorter delay to simulate the size of a small club or cabaret. Respective delay times can be memorized for DOLBY PRO LOGIC and HALL. This operation can also be performed using the delay time button of the remote control transmitter.

NOTE:

If you are in surround mode and change the delay time, but the rear (surround) speakers are not connected, nothing will happen. However, even under these conditions, each time the delay time button and surround mode button are pressed, front speaker muting will occur and sound will disappear momentarily. This is not a malfunction.

■ **Center Mode Button and Indicator (CENTER MODE)**

Use this button setting according to the size of the center speaker for the Dolby Pro Logic Surround.

NORMAL : Use this setting when a small enclosure center speaker.

WIDE BAND: Use this setting when a speaker similar to the left and right stereo speakers is utilized.

PHANTOM : When a center speaker is not present.

■ **Adjusting the Dolby Pro Logic Surround Level**

All the operations except for No.④can be controlled by the remote control transmitter. Functions No.⑦ - ⑨ are operated only by the remote control transmitter.

① Select a source encoded with Dolby Surround.

② Use the SURROUND MODE button to select Dolby Surround mode.

③ Press the CENTER OFF button.
- CENTER OFF indicator will light up and the signal sent to the center speaker will not be produced.

④ Using a section which features dialogue passages, adjust the INPUT BALANCE control knob until any dialogue heard from the left, right, or surround speakers is minimized.

⑤ Press the CENTER OFF button again.
- If it is inconvenient to adjust the input balance control for each Dolby Surround source, the control may be left at the center position with acceptable results.

⑥ Next, use the MASTER VOLUME to set the volume to the desired listening position.

⑦ Press the SURROUND TEST button on the remote control transmitter.
- " TEST " will appear on the display, and pink noise will be output for 1.5 seconds from each of the Left, Center, Right, and Rear (in that order) speakers. When the CENTER MODE is PHANTOM, this will be output in the following order: Left, Left + Right, Right, and Rear.

⑧ Use the remote control CENTER UP/DOWN button to adjust the volume of the center speaker, and REAR UP/DOWN button to adjust the volume of the rear speakers.

⑨ Press the TEST button to cancel the pink noise.

Explanation of the control knobs and buttons

■ **Center OFF Button (CENTER OFF)**

Press this button when adjusting the input balance. Please refer to the procedure described above. When the Center is OFF, the CENTER OFF indicator will light up, and the signal sent to the center speaker will not be produced. When HALL is selected in SURROUND MODE, the Left and Right channels combine to produce the center speaker sound. If this is not necessary, press this button once again. This button's functions can also be controlled by use of the remote control transmitter.

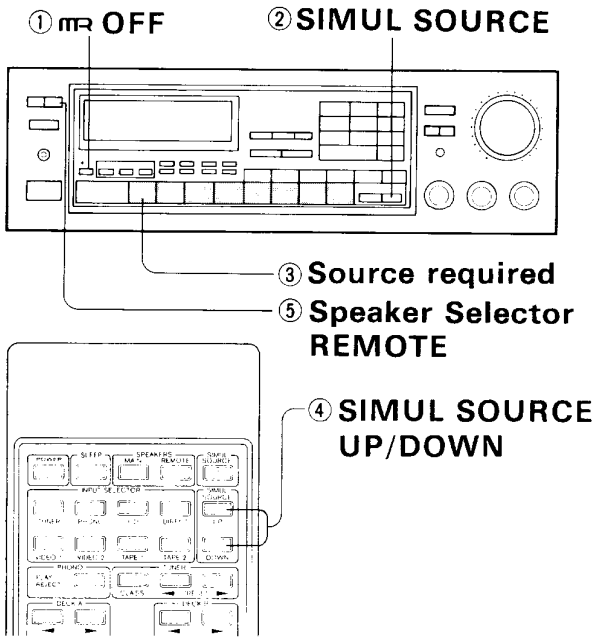
■ **Input Balance Control Knob (INPUT BALANCE)**

In the Dolby Pro Logic Surround mode, if the sound source becomes monaural during playback (for example, if there is conversation) press the CENTER OFF button. Adjust the system so that the sound from the other speakers is minimized. Normally the center position is optimum.

Set this knob to the center position when the Surround Mode is set to a position other than Dolby Surround mode.

Listening to devices connected to the TX-906/904 in another room

- TX-906/904 allows you to listen to the desired performance in another room (sub room) while listening to the playback of a device located in the main room. To do this, connect the speakers in another room to the FRONT SPEAKERS REMOTE terminals on the TX-906/904.
- Remote control from another room can be done by employing the ONKYO multiple room remote system (MR). Refer to the connections for multiple room remote control. Be sure to operate the remote control unit directing to the remote sensor unit HR-10.
- The following steps (except step ①) can be performed using the remote control unit. It is recommended that the adjustments described below be done in the main room in advance, since it is not possible to operate the remote control unit in another room while watching the display of the TX-906/904.



NOTE:

- The surround mode is turned off (bypassed) when controlling the SIMUL SOURCE while listening the surround sound in the main room. (TX-906 only)
- The same source as that indicated by the input selector will be output for the REC OUT of the TAPE-1,2, VIDEO-2 if the SIMUL SOURCE is controlled.
- Press the REC OUT button to change the SIMUL SOURCE mode to the Surround mode or REC OUT selector modes.

Make sure that recording is not being carried out before setting the TX-906/904.

① Turn the MR OFF button OFF (MR indicator is turned off.)

② Press the SIMUL SOURCE button.
- [REC OUT] indicator will be turned off and the [SIMUL SOURCE] indicator will flash for 8 seconds.

③ While this is flashing, use the input selector button to select the desired source.
- [SIMUL SOURCE] will light and the selected source will be marked with a red frame.
- At this time, the display will show the tuner indications for 5 seconds and between the scanning of the CLASSIFIED SCAN programs if the tuner has been selected. PRESET station of the tuner can be selected during this indications.

④ Adjust the level using the SIMUL SOURCE UP/DOWN buttons of the remote control transmitter.
- SIMUL and the level will be indicated on the display. It is recommended that the level be set lower in advance in the main room (−79 ~ −78dB).

⑤ Press the REMOTE button of the SPEAKERS to illuminate the [REMOTE] indicator.
- Press the MAIN button to turn off the [MAIN] indicator if you are not listening the sound in the main room.

When changing the source, be sure to **press the SIMUL SOURCE button** before pressing the input selector button. Pressing the input selector button without first pressing the SIMUL SOURCE button will change the source in the main room.

■ **MR Off button (MR OFF) and Indicator**

This is used to disable control of the ONKYO MR system via the remote control unit in another room. Pressing this button will illuminate the indicator, and control from another room will be disabled. Pressing the button again will turn the indicator off, and control from another room will be enabled.

NOTES:

- If the simul source is selected, the MR OFF will be off.
- If the simul source is selected for REC OUT, and the SURROUND MODE key is selected, the MR OFF will be on.

■ You can use the remote control transmitter supplied with this Tuner Amplifier to operate the source devices selected for the simul source if they are an ONKYO CD or cassette deck bearing the RI mark.

■ There is a remote control unit RC-MR1H for the Sub room, which is sold separately.

■ Installment of the remote sensor unit HR-10 and the remote emitter unit HE-50(AC) is required to control non-ONKYO devices from another (sub room). Operate the remote control unit included with the device by directing the control unit toward the HR-10 installed in another room (sub room).

- IF A PROBLEM OCCURS, use the TX-906/904's front panel controls to verify that the problem is with the remote controller. If there is no problem when operating the TX-906/904 directly, check the batteries in the remote controller first before assuming that there is a controller malfunciton.

NOTES:

- The source may be changed or recording being done on the TX-906/904 may be interrupted when operations are done in the another room. Press the MR Off Button to disable the control from another room. (The MR indicator will be illuminated.)
- Some non-ONKYO remote control transmitters cannot be used.

Trouble shooting guide

NOTE:

If a problem occurs, first operate the unit using the front panel controls to confirm that it is not due to a malfunction (or worn out batteries) of the remote control transmitter.

Trouble	Cause	Remedy
No power.	• Power cord is disconnected. • There is external noise in the computer circuits of the TX-906/904. • AC fuse blown.	• Connect power cord. • Turn the power button off and then on again or remove the AC plug from the outlet. • Contact your ONKYO service center.
Power but no sound.	• Tape monitor switch on. • Audio muting switch on. • Bad connections. • Amplifier protection circuitry has been activated.	• Switch to off. • Switch to off by remote control transmitter. • Check input leads, speaker leads, pin plugs, etc. • Contact your ONKYO service center.
Hum, low-frequency noise.	• Poor or no input ground. • Poor or no phono motor ground. • The placement of the input/output cable on the rear panel is not correctly adjusted.	• Check outer conductor of input plugs. • Check for proper ground connection. • Adjust the placement of the cable to reduce hum.
Howling when the volume is turned up.	• Turntable and speakers are too close together.	• Move them farther apart.
Rough or scratchy sound. High range is not clear.	• Stylus of pick-up is worn. • Stylus tip is dirty. • Treble control too high.	• Replace. • Clean. • Turn treble control down.
AM stations cannot be received.	• AM loop antenna is not attached.	• Connect the included AM loop antenna to the AM antenna terminals.
Buzzing noise on AM (particularly conspicuous at night or with weak stations).	• Noise from electrical apparatus such as fluorescent lamp.	• Move AM loop antenna to different position. • Set up outdoor AM antenna.
High-pitched noise or buzzing noise on TV.	• Noise from TV set.	• Place the AM loop antenna as far as possible from the TV. • Move unit away from TV set.
Crackling noise on AM, FM.	• Noise caused by turning fluorescent lamp on and off. • Noise from automobile ignition.	• Move antenna as far as possible from the fluorescent lamp. • Install an FM outdoor antenna as far as possible from the road. • Change the position or direction of the outdoor antenna.
FM tuned and stereo indicators light but sound is distorted and stereo separation is bad.	• Station is too strong. • Multiple reflection of the radio waves because of tall buildings or mountains.	• Change to T-shaped antenna. • Use antenna which has better directivity and select a point where the distortion is least.
FM Signal Strength Indicators and stereo indicator flicker and hiss is heard on FM.	• Station is too weak. • Stereo FM broadcasts cover only about half the distance of an ordinary broadcast.	• Install an outdoor FM antenna. • Change the position or direction of the outdoor antenna.
No station is recalled when a preset key is pressed.	• The power cord has been unplugged for a long time.	• The memory contents are lost. Store all stations again.
The multiple room remote system does not operate.	• Connection is wrong. • The MR OFF button on the TX-906/904 is engaged. (The MR OFF indicator will light.)	• Check the connection again. • Press the MR OFF button. (The MR OFF indicator will be turned OFF.)
Front panel controls function but remote control transmitter does not.	• No batteries in remote control transmitter. • Batteries have worn out.	• Insert batteries. • Replace batteries.
Also refer to the respective instruction manuals of the video disc player, video cassette recorder, TV monitor, etc., being used.		

The tuning steps by which the tuned frequency changes on each band have been set at the factory to the proper value for the country where each unit is to be sold. If you use the unit in a country where a different tuning step is required or if the broadcast frequencies in your country change so that you can not tune in radio stations precisely, contact your authorized ONKYO Service Center.

Specifications

AMPLIFIER SECTION

	TX-906	TX-904
Power Output:	Stereo mode 80 watts per channel min. RMS. at 8 ohms, both channels driven, from 20Hz to 20,000Hz, with no more than 0.08% total harmonic distortion. Surround/Simul mode 75 watts per channel min. RMS. at 8 ohms both channels driven, from 20Hz to 20,000Hz, with no more than 0.08% total harmonic distortion. (FRONT) 12 watts per channel min. RMS. at 8 ohms 1,000Hz with no more than 0.8% total harmonic distortion. (REAR or REMOTE)	Stereo mode 60 watts per channel min. RMS. at 8 ohms, both channels driven, from 20Hz to 20,000Hz, with no more than 0.08% total harmonic distortion. Simul mode 55 watts per channel min. RMS. at 8 ohms both channels driven, from 20Hz to 20,000Hz, with no more than 0.08% total harmonic distortion. (FRONT) 12 watts per channel min. RMS. at 8 ohms 1,000Hz with no more than 0.8% total harmonic distortion. (REMOTE)
Total Harmonic Distortion:	0.08% at rated power (FRONT)	0.08% at rated power (FRONT)
IM Distortion:	0.08% at rated power (FRONT)	0.08% at rated power (FRONT)
Damping Factor:	60 at 8 ohms (FRONT)	60 at 8 ohms (FRONT)
Sensitivity and Impedance:	Phono: 2.5mV/50 kohms CD/Tape Play: 150mV/50 kohms Tape Rec: 150mV/2.2 kohms Pre out (REAR): 1V, 2.2 kohms Pre out (CENTER): 1V, 2.2 kohms	Phono: 2.5mV/50 kohms CD/Tape Play: 150mV/50 kohms Tape Rec: 150mV/2.2 kohms
Phono Overload:	120mV RMS. at 1,000 Hz, 0.08 % THD.	120mV RMS. at 1,000 Hz, 0.08% THD.
Frequency Response:	20 to 30,000 Hz, +/−1 dB	20 to 30,000 Hz, +/−1 dB
RIAA Deviation:	20 to 20,000 Hz, +/−0.8 dB	20 to 20,000 Hz, +/−0.8 dB
Tone Control:	BASS: +/−10 dB at 100 Hz TREBLE: +/−10 dB at 10,000 Hz	BASS: +/−10 dB at 100 Hz TREBLE: +/−10 dB at 10,000 Hz
Signal to Noise Ratio:	PHONO : 80 dB (IHF A, 5mV input) CD/TAPE: 100 dB (IHF A)	PHONO: 80 dB (IHF A, 5mV input) CD/TAPE: 100 dB (IHF A)
Muting:	− ∞ dB	− ∞ dB

VIDEO SECTION (TX-906/904)

Signal sensitivity and impedance
VDP/VCR normal input, output: 1 $V_{p\text{-}p}$, 75 ohms

TUNER SECTION (TX-906/904)

FM:

Tuning Range:	87.5 — 108.0MHz (100kHz steps)
Usable Sensitivity:	Mono: 11.2dBf, 2.0μV Stereo: 17.2dBf, 4.0μV
50dB Quieting Sensitivity:	Mono: 17.2dBf, 4.0μV Stereo: 37.2dBf, 40μV
Capture Ratio:	1.5dB
Image Rejection Ratio:	40dB
IF Rejection Ratio:	90dB
Signal-to-Noise Ratio:	Mono: 73dB Stereo: 67dB
Alternate Channel Attenuation:	55dB
AM Suppression Ratio:	50dB
Harmonic Distortion:	Mono: 0.15% Stereo: 0.25%
Frequency Response:	30 — 15,000Hz ± 1.5dB
Stereo Separation:	45dB at 1kHz/30dB at 100 — 10,000Hz
Muting Level:	17.2dBf, 4μV

AM:

Tuning Range:	530 — 1710kHz (10kHz steps)
Usable Sensitivity:	30μV
Image Rejection Ratio:	40dB
IF Rejection Ratio:	40dB
Signal-to-Noise Ratio:	40dB
Harmonic Distortion:	0.7%

GENERAL

Power Supply:	AC120V, 60Hz
Dimensions (W × H × D):	455 × 150 × 331.5 mm 17-15/16" × 5-7/8" × 13-1/16"
Weight:	TX-906: 10.8 kg, 23.8 lbs TX-904: 9.7 kg, 21.4 lbs

Specifications and features are subject to change without notice.

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